

IN THE CLAIMS

Proposed amendments to the claims are as follows.

1. (Currently Amended) A crucible comprising:
 a base container to contain liquid silicon material;
 a coating layer covering at least a portion of the base container, wherein the coating layer includes boron nitride; and
 wherein the base container includes multiple separable components.
2. (Original) The crucible of claim 1, wherein the base container includes a material having a coefficient of thermal expansion less than silicon.
3. (Original) The crucible of claim 1, wherein the base container includes graphite.
4. (Previously Presented) The crucible of claim 1, wherein the base container includes silicon dioxide.
5. (Currently Amended) The crucible of claim 3, wherein a central axis of the base container is oriented substantially perpendicular to an orientation of graphite grains in the graphite.
6. (Original) The crucible of claim 1, wherein the coating layer further includes silicon nitride.
7. (Original) The crucible of claim 6, wherein the coating layer includes a first layer of boron nitride adjacent to the base container and a second layer of silicon nitride over the layer of boron nitride.
8. (Previously Presented) An ingot system, comprising:
 a furnace;

a crucible, including:

- a base container to contain liquid silicon material;
- a coating layer covering at least a portion of the base container, wherein the coating layer includes a first layer of boron nitride adjacent to the base container and a second layer of silicon nitride over the layer of boron nitride; and
- a cooling system to extract heat from the crucible.

9. (Original) The ingot system of claim 8, wherein the cooling system includes a directional solidification cooling system.

10. (Original) The ingot system of claim 8, further including a control gas system.

11. (Original) The ingot system of claim 8, wherein the base container includes graphite.

12. (Original) The ingot system of claim 8, wherein the base container includes silicon dioxide.

13 – 27. (Cancelled)

28. (Previously Presented) The ingot system of claim 9, wherein the directional solidification cooling system includes a cooling system to conduct heat from a bottom of the crucible preferentially.

29. (Previously Presented) A crucible comprising:

- a base container to contain liquid silicon material;
- a coating layer covering at least a portion of the base container, wherein the coating layer includes boron nitride; and
- wherein the coating layer includes a first layer of boron nitride adjacent to the base container and a second layer of silicon nitride over the layer of boron nitride.

30. (Previously Presented) The crucible of claim 29, wherein the base container includes graphite.
31. (Currently Amended) The crucible of claim 30, wherein a central axis of the base container is oriented substantially perpendicular to an orientation of graphite grains in the graphite.
32. (Previously Presented) The crucible of claim 29, wherein the base container is integrally formed.
33. (Currently Amended) The crucible of claim 29, wherein the base container includes multiple separable components.
34. (Previously Presented) The crucible of claim 29, wherein the base container includes quartz.
35. (Previously Presented) An ingot system, comprising:
 a furnace;
 a crucible, including:
 a base container to contain liquid silicon material;
 a coating layer covering at least a portion of the base container, wherein the coating layer includes boron nitride; and
 a cooling system to extract heat from the crucible including a directional solidification cooling system.
36. (Previously Presented) The ingot system of claim 35, wherein the directional solidification cooling system includes a cooling system to conduct heat from a bottom of the crucible preferentially.

37. (Previously Presented) The ingot system of claim 35, wherein the base container includes graphite.

38. (Previously Presented) The ingot system of claim 35, wherein the base container includes quartz.

39. (Previously Presented) The ingot system of claim 35, wherein the coating layer includes a first layer of boron nitride adjacent to the base container and a second layer of silicon nitride over the layer of boron nitride.